

METHOD OF OPERATION  
LINE CIRCUIT

From Local Station - Trouble Desk And Chief Switchman's Desk - FULL MECHANICAL  
POWER DRIVEN SYSTEM.

GENERAL DESCRIPTION

1. This circuit is used for connecting a local station to either a trouble desk, a local test desk or both.
2. When the receiver is removed from the switchhook at a local station, a lamp flashes at the desk on which the line terminates. The call is answered by the operation of a key associated with the flashing line lamp, which causes the lamp to burn steadily as a busy signal, and connects the telephone circuit across the line.
3. On an outgoing call, the key is operated connecting the telephone circuit across the line and causing the lamps to burn steadily as busy signals. Ringing current is then applied to the line by the operation of the ringing key in the telephone circuit, ringing the local station bell.
4. When the receiver is replaced on the switchhook and the key is released, the lamps are extinguished and the circuit is restored to normal.

DETAILED DESCRIPTION

OPERATION.

INCOMING CALLS

5. When the receiver is removed from the switchhook at the local station, a circuit is closed through the sub-set operating the L relay, through both its windings in series. The L relay operated, disconnects the sub-set ringer from the ring side of the line connects the ring through to the desk key, operates the L-1 relay through the break contact of the CO relay. The L-1 relay operated causes the auxiliary signal circuit to function at the trouble and local test desks and connects the line lamps at the desk to the flashing circuit.
6. The call is answered by the operation of the key which bridges the telephone circuit across the line, operates the CO relay, and opens the circuit through the L-1 relay releasing it. The CO relay then locks through its make contact to ground on the make contact of the L relay and replaces the interrupted battery of the lamp circuit with steady battery on its make contact, causing the lamp to burn steadily as busy signals.
7. The release of the key disconnects the telephone circuit from the line, releases the CO relay which in turn extinguishes the lamps. When the receiver is replaced on the switchhook at the local station the L relay releases, restoring the circuit to normal.

OUTGOING CALL

8. A call to a local station from the trouble desk or the local test desk is originated by the operation of the key. Ringing current is applied to the ring side of the line by the operation of the ringing key in the telephone circuit (not shown), ringing the bell at the local station through the break contact of the L relay to ground on its other break contact. The CO relay operates and locks lighting the lamps steadily as busy signals. When the receiver is removed from the switchhook at the local station, the L relay operates as described for calls incoming to the desk except the L-1 relay does not operate since its circuit is opened through the break contact of the CO relay. When the key is released and the receiver replaced on the switchhook the circuit is restored to normal.

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CIRCUIT REQUIREMENTS

OPERATE

NON-OPERATE

RELEASE

E31 Test .025 amp.  
(L-1) Readj. .012 amp.

Test .0038 amp.  
Readj. .004 amp.

E250 Test .031 amp.  
(CO) Readj. .023 amp.

Test .017 amp.  
Readj. .018 amp.

E549 Test .036 amp.  
(L) Readj. .027 amp.  
Windings  
in Se-  
ries  
aiding.

Test .0047 amp.  
Readj. .005 amp.

ENG.--ANB-VL.  
1/16/22.

CHK'D.--CHW.

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